Section II-iii-J

Soil Features

This table gives estimates of several important soil features which are used in land use planning that involves engineering considerations. Soil features which are covered include bedrock depth and hardness, cemented pan depth and hardness, subsidence, potential frost action, and risk of corrosion for uncoated steel or for concrete.

Depth to Bedrock

This value is given if bedrock is within a depth of 60 inches. The depth is based on many soil borings and observations made during soil mapping. The rock is specified as either soft or hard. If the rock is soft, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Cemented Pan

Cemented pan is a nearly continuous layer of indurated or strongly cemented material having a hard, brittle consistency because the particles are held together by cementing substances such as, calcium carbonate, or oxides of silicon, iron, or aluminum. These layers are identified when they occur within a depth of 60 inches. Pans are classified as "thin" or "thick". "Thin" cemented pans are thin enough so that excavations can be made with trenching machines, backhoes, or small rippers and other equipment common to construction of pipelines, sewerlines, cemeteries, and the like. "Thick" cemented pans are sufficiently thick or massive to require blasting or special equipment beyond which is considered normal in excavating for this type of construction.

Subsidence

Subsidence potential is the maximum possible loss of surface elevation from the drainage of wet soils having organic layers or semifluid mineral layers. Estimates of the depth of subsidence (in inches) that takes place soon after drainage (initial subsidence) and after oxidation (total subsidence) are given for soils that are likely to subside.

Potential Frost Action

This is the likelihood of upward or lateral movement of soil by the formation of segregated ice lenses (frost heave) and the subsequent loss of soil strength upon thawing. The following classes are used in regions where frost action is a potential problem: (1) Low -- soils are rarely susceptible to the formation of ice lenses, (2) Moderate -- soils are susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength, and (3) High -- soils are highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength.

Risk of Corrosion

Various metals and other materials corrode when on or in the soil, and some metals and materials corrode more rapidly when in contact with specific soils than when in contact with others. Corrosivity ratings are given for two of the common structural materials, uncoated steel and concrete. The risk of corrosion classes are low, moderate, and high.

See the National Soil Survey Handbook, Part 618, for definitions and discussion of particular properties.

Soil Features

Kennebec County, Maine

Absence of an entry indicates that the feature is not a concern or that data were not estimated.

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
BhB:										
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
BkB:										
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
BkC:										
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
BkD:										
Berkshire	---	---	---	---	0	---	Moderate	Low	High	
Bo:										
Biddeford	---	---	---	---	0	---	High	High	Moderate	
BuB2:										
Buxton	---	---	---	---	0	---	High	High	Moderate	
BuC2:										
Buxton	---	---	---	---	0	---	High	High	Moderate	
C.F.:										
Cut And Fill Land	---	---	---	---	0	---	---	---	---	
D.L.:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
D.L.:										
Dune Land	---	---	---	---	0	---	None	---	---	
DeB:										
Deerfield	---	---	---	---	0	---	Moderate	Low	High	
G.P.:										
Gravel Pits	---	---	---	---	0	---	None	---	---	
Ha:										
Hadley	---	---	---	---	0	---	High	Low	Moderate	
HfC:										
Hartland	---	---	---	---	0	---	High	Low	Moderate	
HfD:										
Hartland	---	---	---	---	0	---	High	Low	Moderate	
HkB:										
Hinckley	---	---	---	---	0	---	Low	Low	High	
HkC:										
Hinckley	---	---	---	---	0	---	Low	Low	High	
HkD:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
HkD:										
Hinckley	---	---	---	---	0	---	Low	Low	High	
HrB:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
HrC:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
HrD:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
HtB:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
HtC:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
HtD:										
Hollis	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
Lk:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
Lk:										
Limerick	---	---	---	---	0	---	High	High	Moderate	
LyB:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
LyC:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
LyD:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
LzC:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
M.L.:										
Made Land	---	---	---	---	0	---	None	---	---	
MoA:										
Monarda	---	---	---	---	0	---	High	High	High	
MrA:										
Monarda	---	---	---	---	0	---	High	High	High	

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
PbB:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
PbC:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
PcB:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
PcC:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
PcD:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
PdB:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PdC2:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PdD2:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
PdD2:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PeB:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PeC:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PeD:										
Paxton	---	---	---	---	0	---	Moderate	Low	Moderate	
Charlton	---	---	---	---	0	---	Moderate	Low	High	
PfB:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PkB:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
PkB:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PkC:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
RcA:										
Ridgebury	---	---	---	---	0	---	High	High	Moderate	
RdA:										
Ridgebury	---	---	---	---	0	---	High	High	Moderate	
Rf:										
Rifle	---	---	---	---	0	---	High	High	Low	
SA:										
Saco	---	---	---	---	0	---	High	High	Moderate	
ScA:										
Scantic	---	---	---	---	0	---	High	High	Moderate	
Sd:										
Scarboro	---	---	---	---	0	---	Moderate	High	High	
SkB:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
SkB:										
Scio	---	---	---	---	0	---	High	Low	Moderate	
SkC2:										
Scio	---	---	---	---	0	---	High	Low	Moderate	
SuC2:										
Suffield	---	---	---	---	0	---	High	High	Moderate	
SuD2:										
Suffield	---	---	---	---	0	---	High	High	Moderate	
SuE2:										
Suffield	---	---	---	---	0	---	High	High	Moderate	
To:										
Togus	---	---	---	---	0	---	High	High	High	
Va:										
Vassalboro	---	---	---	---	0	---	High	High	High	
WmB:										

Soil Features - Continued

Kennebec County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
WmB:										
Windsor	---	---	---	---	0	---	Low	Low	High	
WmC:										
Windsor	---	---	---	---	0	---	Low	Low	High	
WmD:										
Windsor	---	---	---	---	0	---	Low	Low	High	
Wn:										
Winooski	---	---	---	---	0	---	High	Moderate	Moderate	
WrB:										
Woodbridge	---	---	---	---	0	---	High	Moderate	Moderate	
WrC:										
Woodbridge	---	---	---	---	0	---	High	Moderate	Moderate	
WsB:										
Woodbridge	---	---	---	---	0	---	High	Moderate	Moderate	
WsC:										
Woodbridge	---	---	---	---	0	---	High	Moderate	Moderate	